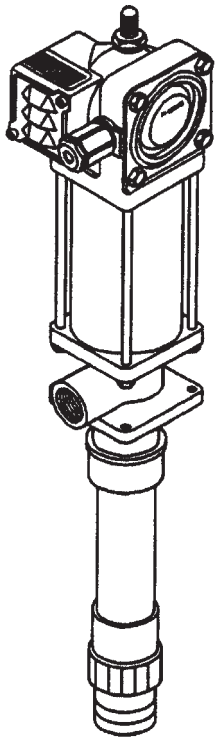
LOCTITE®

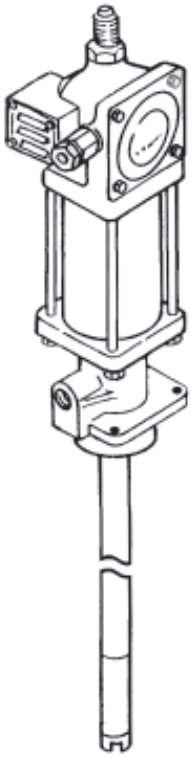
EQUIPMENT
Operation Manual AA988555



Loctite® Low Viscosity Fluid Pumps 3:1 and 14:1 Ratios

Part Numbers

988514 (3:1 Carbon Steel, 55 Gal.)
988516 (3:1 Inert, 55 Gal.)
988517 (3:1 Carbon Steel, 5 Gal.)
988519 (3:1 Inert, 5 Gal.)
988520 (14:1 Carbon Steel, 55 Gal.)
988522 (14:1 Inert, 55 Gal.)
988523 (14:1 Carbon Steel, 5 Gal.)
988525 (14:1 Inert, 5 gal.)
988543 (Pump Hoist)
988554 (Wall Mount Kit)



IT IS THE RESPONSIBILITY OF THE OWNER AND/OR OPERATOR TO PROPERLY USE AND MAINTAIN THIS EQUIPMENT. CAREFULLY READ AND UNDERSTAND THE INSTRUCTIONS AND WARNINGS IN THIS MANUAL BEFORE OPERATING THIS EQUIPMENT.

If the operator is not fluent in English, the instructions and warnings shall be read and discussed in the operator's native language, making sure the operator comprehends the contents.

This equipment complies with OSHA Standards where applicable.

⚠ WARNING

DO NOT exceed the stated maximum working pressure of the airmotor or of the lowest rated component in your system.

DO NOT alter or modify any part of this equipment.

DO NOT operate this equipment with combustible gas.

DO NOT attempt to repair or disassemble the equipment while the system is pressurized.

TIGHTEN all fluid connections securely before using this equipment.

ALWAYS read and follow the fluid manufacturer's recommendations regarding fluid compatibility, and the use of protective clothing and equipment.

CHECK all equipment regularly and repair or replace worn or damaged parts immediately.

IMPORTANT: Failure to heed these warnings including misuse, overpressurizing, modifying parts, using incompatible chemicals and fluids, or using worn or damaged parts, may result in equipment damage and/or serious personal injury, fire, explosion, or property damage.

This manual contains IMPORTANT WARNINGS and INSTRUCTIONS. READ AND RETAIN FOR REFERENCE.

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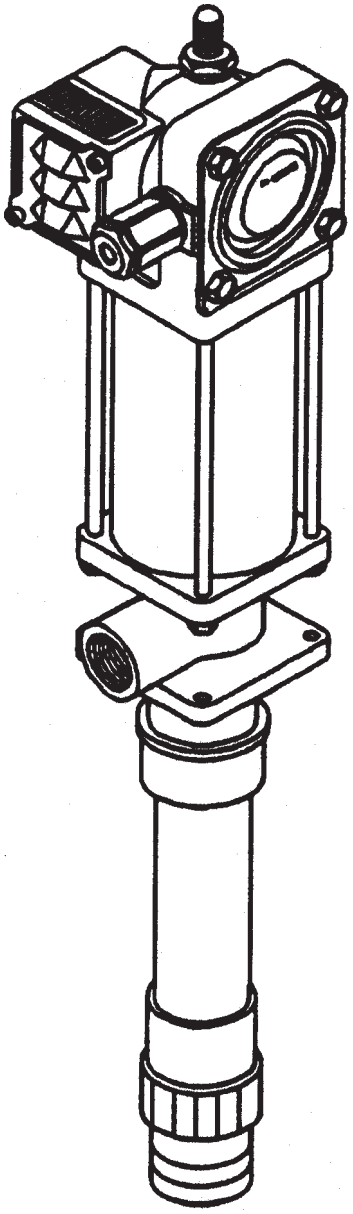
Henkel Technologies

Part Nos. 988514, 988516, 988517, 988519
3:1 Low Viscosity Fluid Pumps



SPECIFICATIONS	
Airmotor effective dia. in.	2.0
Stroke, in.	4.8
Air inlet	1/4" NPT
Material outlet	1/2" NPT
Liquid to Air Pressure Ratio	3:1
Delivery output, G.P.M.	6
Delivery in cubic inches per cycle	7.9
Suction head, ft. of oil primed pump	25
Minimum air pressure	40 p.s.i.
Maximum air pressure	200 p.s.i.
Max output pressure	600 p.s.i.
Noise level @ 120 psig	< 85 dBA

DESCRIPTION

The 3:1 Low Viscosity Fluid Pump is designed to pump low and medium viscosity materials. The pump is self-priming and develops a suction head up to 25 ft. of oil after priming.

OWNER/OPERATOR RESPONSIBILITY

It is the owners/operators responsibility to properly use and maintain this equipment.

The instructions and warnings contained in this manual shall be read and understood by the owner/operator prior to operating this equipment.

If an owner/operator does not understand English,the contents of this manual shall be explained in the owners/ operators native language to assure the owner/operator comprehends.

It is the owners/operators responsibility to maintain the legibility of all warning and instruction labels.

The owner/operator shall retain this manual for future reference to Important warnings, operating and maintenance Instructions.

SAFETY INFORMATION

Read and understand all warnings, cautions and instructions before operating this equipment. Extreme caution should be used when operating this equipment as personal injury and/ or property damage can result from equipment misuse. Adequate personal protection is recommended to prevent splashing of material on the skin or in the eyes. ALWAYS disconnect air coupler from pump when the pump is not being used.

3:1 Low Viscosity Fluid Pumps

⚠ CAUTION

The pump was tested in lightweight oil which was left in to protect the pump from corrosion. Flushing the pump before connecting it to the system might be desired to prevent possible contamination of the fluid you are pumping.

⚠ WARNING

To reduce the risk of injury from splashing or static sparking when flushing the pump with solvents, always hold a metal part of the dispensing valve firmly to the side of a grounded metal pail and operate pump at lowest possible fluid pressure.

PRESSURE RELIEF PROCEDURE

Always perform this procedure when the pump is shut off and before checking, servicing, installing, cleaning or repairing any part of this system.

Perform the following procedure:

A. Disconnect the air supply to the pump.

B. Point the dispensing valve away from yourself and others.

C. Open the dispensing valve into an appropriate container until the pressure is relieved.

If the above procedure does not relieve the pressure, the dispensing valve or hose may be restricted. To relieve the pressure, very slowly loosen the hose end coupling. Then loosen completely and clear the dispensing valve and/or hose.

OPERATION

BEFORE USING PUMP

Prior to operation or maintenance a visual inspection shall be made. Check pump system for leaks, worn or missing parts.

Any pump that appears to be damaged in any way, is badly worn or operates abnormally shall be removed from use until repairs are made. Contact a factory authorized service center for repairs.

If overpressurizing of the equipment is believed to have occurred, contact a factory authorized service center for inspection of the pump.

Annual inspection by a factory authorized service center is recommended.

USING PUMP

⚠ WARNING

To prevent personal injury, perform PRESSURE RELIEF PROCEDURE before and after operating the pump.

To start pump, turn on the main air supply. Slowly open the air regulator. Regulate air pressure from 20-40 psig and throttle to prime pump. Open the dispensing valve to allow air to be purged from the system. Allow pump to cycle until fluid without air pockets flows from dispensing valve, then close dispensing valve.

After pump is primed, adjust air pressure to achieve a smooth flow of fluid from the dispensing valve. Do not allow pump to operate when out of material. Pump will accelerate quickly and run too fast, resulting in costly damage to the pump.

If the pump accelerates quickly or is running too fast, stop it immediately. Check the fluid supply and refill it If necessary. Prime the pump to remove all air from the system, or flush the pump and relieve pressure.

In a direct supply system, with adequate air pressure supplied to the motor, the pump starts when the gun or dispensing valve is opened and stalls against pressure when it is closed.

Use the air regulator to control pump speed and fluid pressure. Always use the lowest pressure required to achieve the desired results. Higher pressures will cause pump packings to wear prematurely.

MAINTENANCE

⚠ WARNING

To prevent personal injury, perform PRESSURE RELIEF PROCEDURE before and after operating the pump and before performing any maintenance.

LUBRICATION

An air line filter/regulator/lubricator Is recommended for use with your Loctite pump to remove harmful dirt and moisture from your compressor air supply, and to provide automatic air motor lubrication.

MATERIAL RESTRICTION PREVENTION

Flush the system as required with a compatible solvent to prevent material buildup when pumping material that dries or hardens.

DISASSEMBLY

⚠ WARNING

To prevent personal injury perform PRESSURE RELIEF PROCEDURE before and after operating and before performing any disassembly or assembly.

NOTE

If complete disassembly is required, order the repair kit and replace ALL gaskets, O-rings and packings.

A. Remove valve cap (Item #1), trip rod pin (Item #2) and trip collar (Item #21).

B. Remove four tie nuts (Item #45) from tie rods (Item #44).

C. Unscrew trip sleeve (Item #55) from the trip rod (Item #28) and lift air valve casting (Item # 4) off of air cylinder (Item # 29).

D. Remove packing nut (Item #42) and packing cap (Item #39) from air valve casting. Remove the packing (Item #40) and packing washer (Item #41).

E. Remove four screws (Item #59) and cover (Item #58) with the O-ring (Item #57).

F. Remove four screws (Item #38), toggle plate (Item #56), trip shoe (Item #53) and trip sleeve (Item #55).

G. Remove four valve seat screws (Item #52), four springs (Item #51), valve guide plate (Item #54) with two springs (Item #46), two balls (Item #48) and valve slide and seat kit (Item #49) with gasket (Item #47).

H. Unscrew trip rod packing nut (Item #25) from air valve casting and remove all packing and gaskets.

I. Unscrew foot valve body (Item #35) and pump tube (Item #33) from outlet casting (Item #14).

J. Remove air cylinder (Item #29) and air passage tube (Item #8) from outlet casting.

K. Place wrench on piston seat (Item #18) and connecting rod (Item #32). Remove piston seat (Item #18) and piston (Item #17) with two packings (Item #16) and spring stop (Item #15).

L. Place wrench on piston bolt (Item #5) and piston rod (Item #27) and remove piston bolt (Item #5), piston packing (Item #26), two washers (Item #7) and trip rod (Item #28).

M. Unscrew gland packing nut (Item #9) from outlet casting and remove all gland seal parts.

TROUBLESHOOTING

If the following procedures do not correct the problem, contact a factory authorized service center.

PROBLEMS

AIRMOTOR DOES NOT OPERATE.

- Check air supply to pump.
- Check trip rod pin (Item #2), trip rod (Item #28) and toggle assembly (Item #56) for breakage or loose parts.

AIR SEEPAGE FROM AIR EXHAUST WHILE PUMP IS NOT OPERATING

- Check valve slide and seat kit (Item #49) and gasket (Item #47), trip rod packing (Item #24) and washer (Item #23). Replace if necessary.

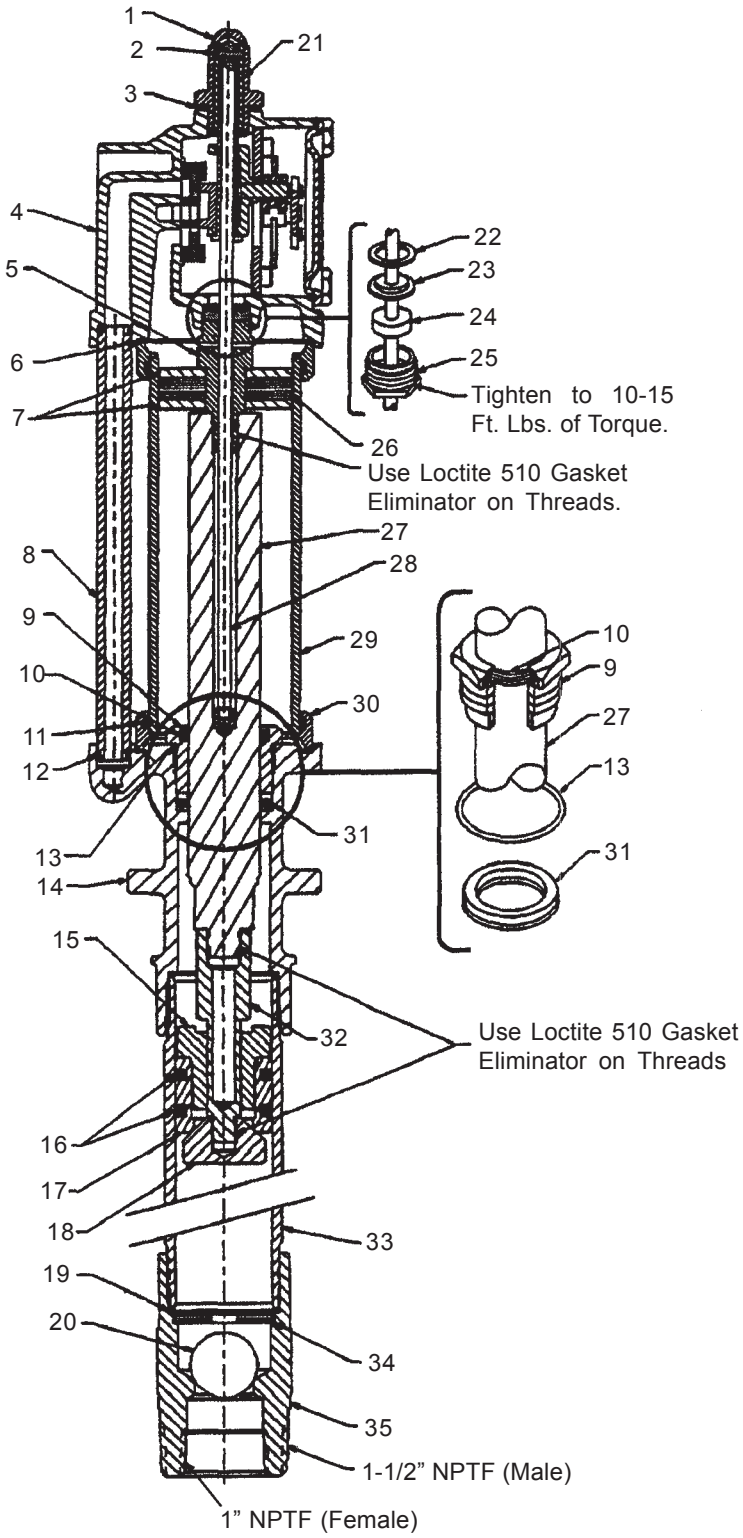
LOSS OF PRESSURE, VOLUME OR CONTINUOUS OPERATION OF PUMP WHEN NOT IN NORMAL USE.

- Clean piston seat and ball foot valve.
- If worn or damaged, replace piston (Item #17), piston seat (Item #18) and piston packings (Item #16).
- Check inside diameter of pump tube (Item #33). If scored, replace pump tube.

ASSEMBLY

To reassemble, perform DISASSEMBLY procedures in reverse.

3:1 Low Viscosity Fluid Pumps



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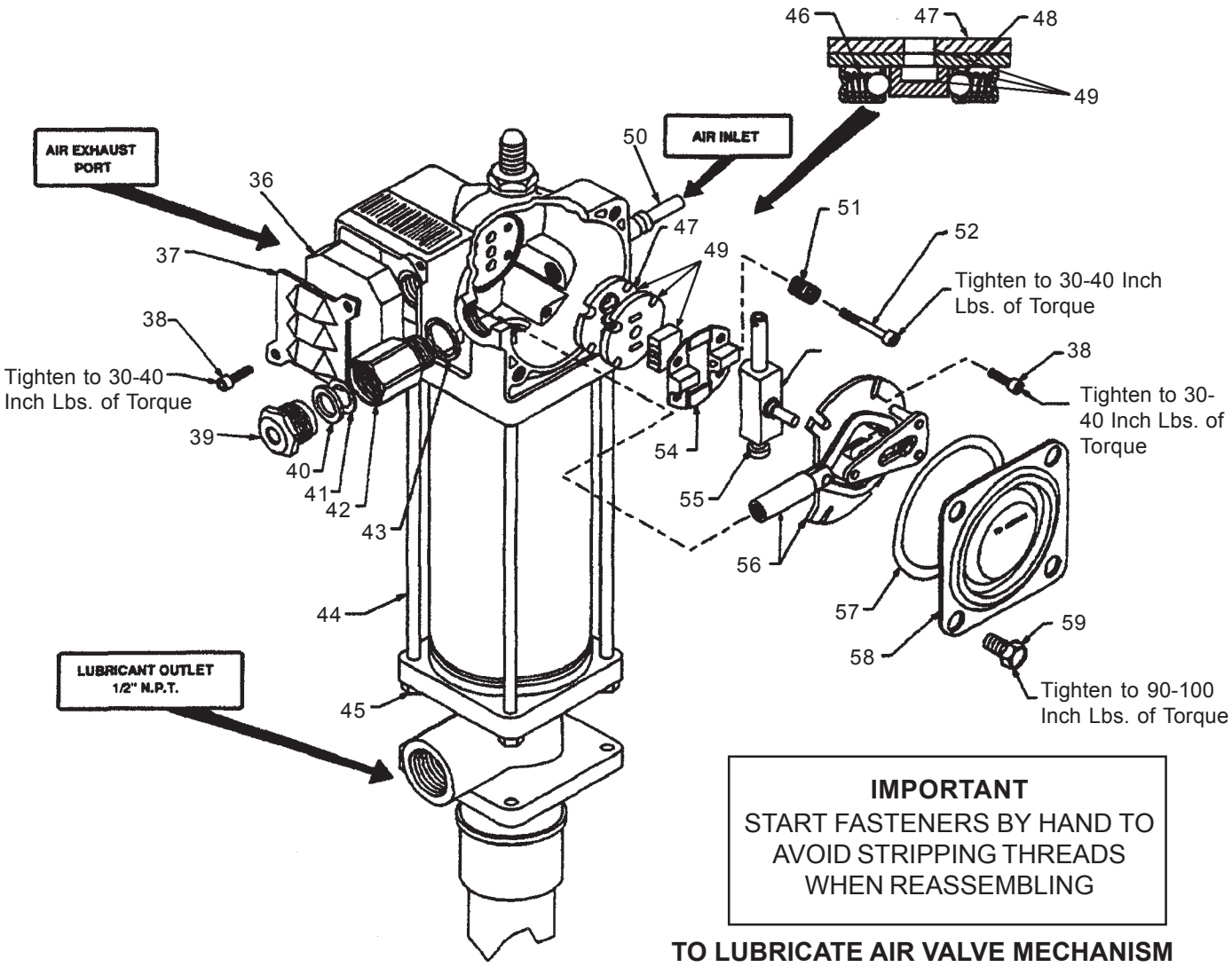
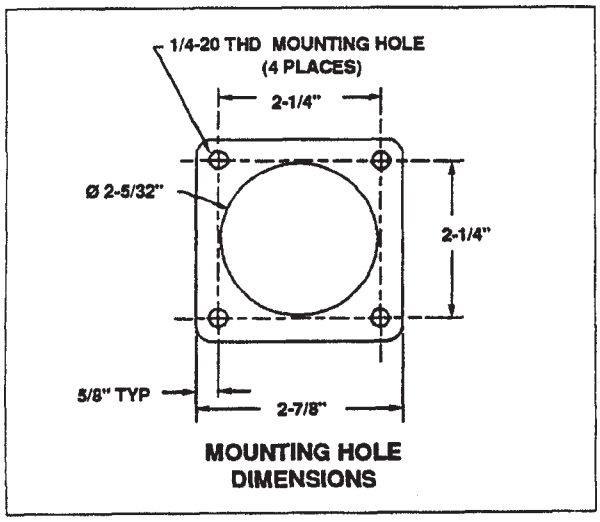


IMPORTANT
START FASTENERS BY HAND TO AVOID STRIPPING THREADS WHEN REASSEMBLING



TO LUBRICATE AIR VALVE MECHANISM

A. DISCONNECT AIR TO PUMP.

B. PERFORM PRESSURE RELIEF PROCEDURE.

C. REMOVE FOUR COVER SCREWS, COVER PLATE AND COVER PLATE GASKET.

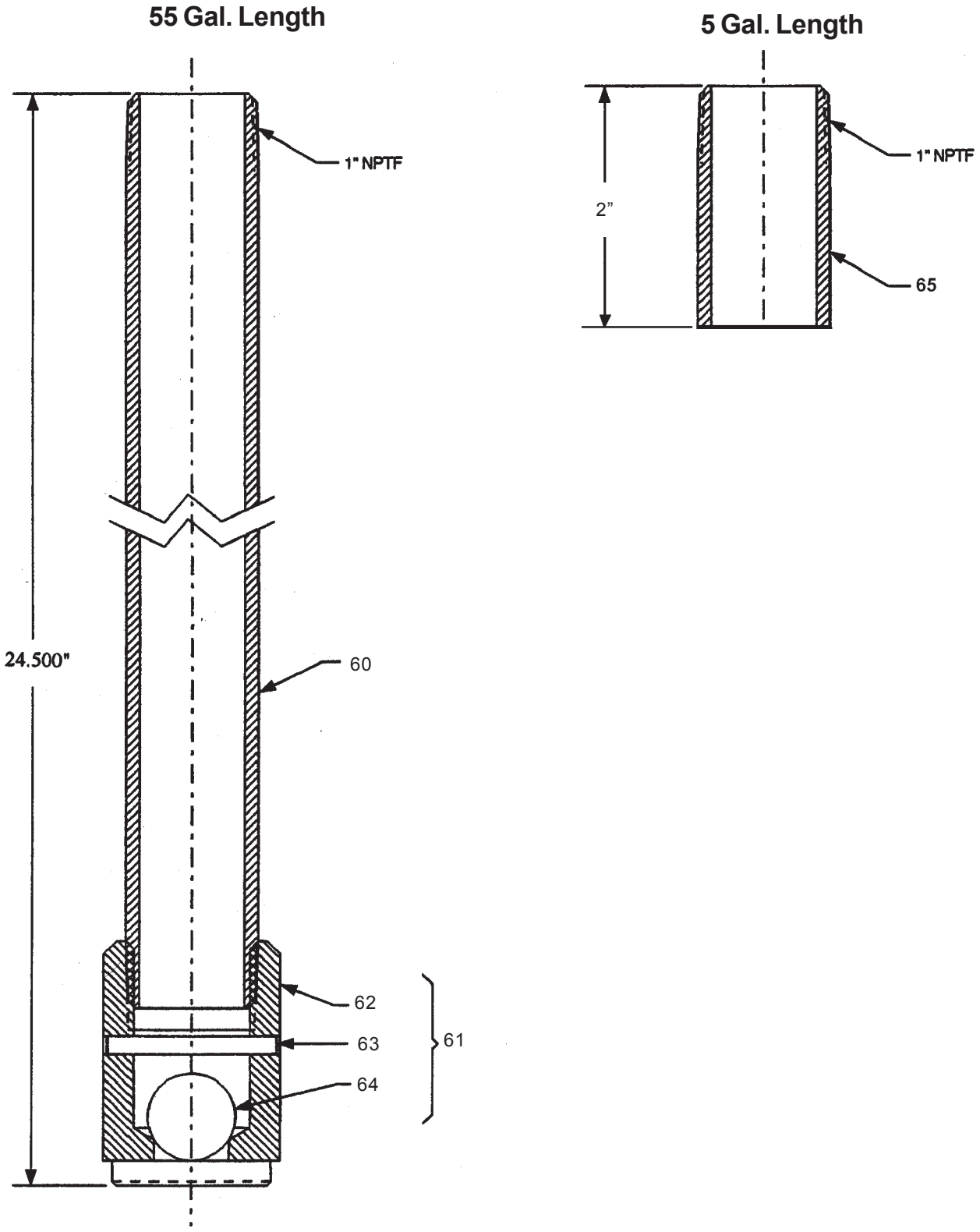
D. PACK GREASE BEHIND TOGGLE PLATE. USE AP-PROX. 1-1/2 OUNCES OF N.L.G.I. NO 1 (LIGHT GRADE) WATER REPELLENT GREASE 220, SP2.

E. IF TOGGLE PLATE HAS BEEN REMOVED FROM AIR VALVE CASTING, PACK CAVITY WITH GREASE BEFORE REPLACING TOGGLE PLATE.

F. REPLACE COVER PLATE GASKET, COVER PLATE AND COVER SCREWS. TIGHTEN TO PREVENT AIR LEAKS.

G. PERIODIC INSPECTION OF PARTS AT LEAST ONCE A YEAR IS ADVISED.

3:1 Low Viscosity Fluid Pumps



3:1 Low Viscosity Fluid Pumps

PARTS LIST FOR 3:1 LOW VISCOSITY FLUID PUMPS

Item No.	Description	Qty.	Part No. 988514	Part No. 988516	Part No. 988517	Part No. 988519
1	Valve Cap	1	AA11470	AA11470	AA11470	AA11470
2	Trip Rod Pin	1	AA11472	AA11472	AA11472	AA11472
3	Valve Cap Gasket	1	AA30011	AA30011	AA30011	AA30011
4	Air Valve Casting	1	AA237562	AA237562	AA237562	AA237562
5	Piston Bolt	1	AA245424	AA245424	AA245424	AA245424
6	Gasket	2	AA33014	AA33014	AA33014	AA33014
7	Air Piston Washer	2	AA246499	AA246499	AA246499	AA246499
8	Air Passage Tube	1	AA62383	AA62383	AA62383	AA62383
9	Gland Packing Nut	1	AA245426	AA245426	AA245426	AA245426
10	Quad Ring	1	*AA273526	**AA273527	*AA273526	**AA273527
11	O-ring	2	AA34420	AA34420	AA34420	AA34420
12	O-ring	2	AA34368	AA34368	AA34368	AA34368
13	O-ring	1	*AA245429	*AA245429	*AA245429	*AA245429
14	Outlet Casting	1	AA245401	AA245401	AA245401	AA245401
15	Spring Stop	1	AA12337	AA273616	AA12337	AA273616
16	Piston Seal	2	*AA273528	**AA273529	*AA273528	**AA273529
17	Piston	1	*AA16635	*AA16635	*AA16635	*AA16635
18	Piston Seat	1	*AA12758	AA273617	*AA12758	AA273617
19	Pump Tube Gasket	2	*AA241516	**AA273622	*AA241516	**AA273622
20	Check Ball	1	AA66203	AA273619	AA66203	AA273619
21	Trip Collar	1	AA11471	AA11471	AA11471	AA11471
22	Gasket	1	AA33039	AA33039	AA33039	AA33039
23	Washer	1	AA246500	AA246500	AA246500	AA246500
24	Packing	1	AA236835	AA236835	AA236835	AA236835
25	Trip Rod Packing Nut	1	AA245425	AA245425	AA245425	AA245425
26	Air Piston Packing	1	AA261078	AA261078	AA261078	AA261078
27	Piston Rod	1	AA241510	AA273620	AA241510	AA273620
28	Trip Rod	1	AA91528	AA91528	AA91528	AA91528
29	Air Cylinder	1	AA246496	AA246496	AA246496	AA246496
30	Cylinder Ring	2	AA246497	AA246497	AA246497	AA246497
31	U-cup	1	*AA273524	**AA273525	*AA273524	**AA273525
32	Connecting Rod	1	AA16636	AA273618	AA16636	AA273618
33	Pump Tube	1	AA241511	AA273621	AA241511	AA273621
34	Ball Stop	1	AA241518	AA273624	AA241518	AA273624
35	Foot Valve Body	1	AA241517	AA273623	AA241517	AA273623
36	Muffler	1	AA236833	AA236833	AA236833	AA236833
37	Muffler Cover	1	AA236615	AA236615	AA236615	AA236615
38	Screw	6	AA236869	AA236869	AA236869	AA236869
39	Packing Cap	1	AA11905	AA11905	AA11905	AA11905
40	Packing	1	AA34110	AA34110	AA34110	AA34110
41	Packing Washer	1	AA48237	AA48237	AA48237	AA48237
42	Packing Nut	1	AA11904	AA11904	AA11904	AA11904
43	Packing Nut Gasket	1	AA30003	AA30003	AA30003	AA30003
44	Tie Rod	4	AA241512	AA241512	AA241512	AA241512

3:1 Low Viscosity Fluid Pumps

PARTS LIST FOR 3:1 LOW VISCOSITY FLUID PUMPS

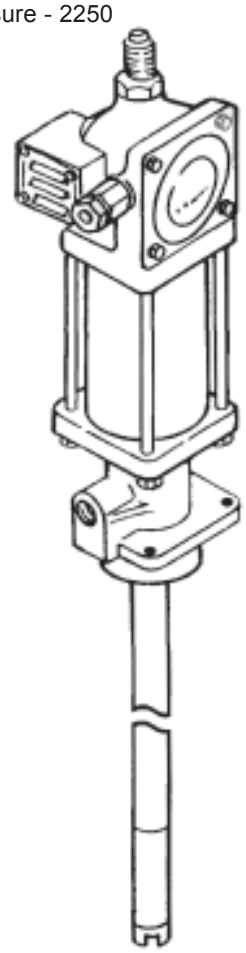
Item No.	Description	Qty.	Part No. 988514	Part No. 988516	Part No. 988517	Part No. 988519
45	Nut	4	AA51009	AA51009	AA51009	AA51009
46	Spring	2	AA56038	AA56038	AA56038	AA56038
47	Valve Gasket	1	AA38162	AA38162	AA38162	AA38162
48	Steel Ball	2	AA69102	AA69102	AA69102	AA69102
49	Slide and Seat Kit	1	AA83063	AA83063	AA83063	AA83063
50	Air Nipple	1	AA238394	AA238394	AA238394	AA238394
51	Spring	4	AA55138	AA55138	AA55138	AA55138
52	Valve Seat Screw	4	AA236870	AA236870	AA236870	AA236870
53	Trip Shoe	1	AA11475	AA11475	AA11475	AA11475
54	Valve Guide Plate	1	AA45605	AA45605	AA45605	AA45605
55	Trip Sleeve	1	AA11947	AA11947	AA11947	AA11947
56	Toggle Assembly	1	AA91331S	AA91331S	AA91331S	AA91331S
57	O-ring	1	AA34158	AA34158	AA34158	AA34158
58	Cover	1	AA236286	AA236286	AA236286	AA236286
59	Screw	4	AA236868	AA236868	AA236868	AA236868
60	Suction Tube	1	AA246782	AA273692	n/a	n/a
61	Foot Valve Assembly	1	AA85765	AA273688	n/a	n/a
62	Foot Valve Body	1	AA246778	AA273691	n/a	n/a
63	Pin	1	AA13056	AA273689	n/a	n/a
64	Check Ball	1	AA66728	AA273690	n/a	n/a
65	Suction Tube	1	n/a	n/a	AA273569	AA273569

*Included in Repair Kit No. 988833

**Included in Repair Kit No. 988834

Part Nos. 988520, 988522, 988523, 988525
14:1 Low Viscosity Fluid Pumps

Specifications:
14:1 Ratio
Output - 1.7 cu./ in./Cyl.
Min. Air Pressure - 30 PSI
Max. Air Pressure - 160 PSI
Max. Output Pressure - 2250



SAFETY INSTRUCTIONS

For professional use only. Observe all warnings. Read and understand all instructions before operating equipment. Extreme caution should be used when operating this equipment as personal injury and/or property damage can result from equipment misuse.

This equipment generates very high fluid pressure. Extreme caution should be used when operating this equipment as material from dispensing valve or leaks from loose or ruptured components can inject fluid through the skin and into the body causing serious bodily injury including possible need for amputation. Adequate protection is recommended to prevent splashing of material onto the skin or into the eyes.
IMPORTANT: If any fluid appears to penetrate the skin, get emergency medical care immediately! Do not treat as a simple cut. Tell attending physician exactly what fluid was injected.

⚠ WARNING

NEVER point the dispensing valve at any part of the body or at another person.

⚠ WARNING

NEVER try to stop or deflect material from dispensing valve or leaking connection or component with your hand or body.

⚠ WARNING

ALWAYS check equipment for proper operation before each use, making sure safety devices are in place and operating properly. DO NOT alter or modify any part of the equipment as this may cause a malfunction and result In serious bodily injury.

⚠ WARNING

ALWAYS follow the pressure relief procedure after shutting off the pump, when checking or servicing any part of the system, and when installing, cleaning or changing any part of the system.

⚠ WARNING

ALWAYS read and follow the fluid and solvent manufacturer's recommendations regarding the use of protective clothing and equipment.

⚠ WARNING

Pressure Relief Procedure
To reduce the risk of serious bodily injury, including splashing into the eyes or onto the skin, always follow this procedure. Whenever you shut off the pump, when checking or servicing any part of the system, and when installing, cleaning or changing any part of the system.

1. Disconnect air to the pump.
2. Point the dispensing valve away from yourself and others.
3. Open the dispensing valve into an appropriate container until pressure is relieved.

If you suspect that the dispensing valve or hose is completely clogged or that pressure has not been fully relieved after following the above procedure, VERY SLOWLY loosen the hose end coupling to relieve pressure gradually, then loosen completely. Now clear the valve or hose.

INSPECTION INSTRUCTIONS

If overpressurizing of the equipment is believed to have occurred, contact the factory authorized warranty and service center nearest you for inspection of the pump.

Specialized equipment and knowledge is required for repair of this pump. Contact the factory authorized warranty and service center nearest you for repair or adjustments other than maintenance specified in this manual.

Annual inspection by the factory authorized warranty and service center nearest you is recommended.

A list of factory authorized warranty and service centers is available upon request.

14:1 Low Viscosity Fluid Pumps

DAMAGED PUMPS

Any pump that appears to be damaged in any way, is badly worn or operates abnormally shall be removed from use until repairs are made. Contact the factory authorized warranty and service center nearest you for repairs.

INSTALLATION

An air line filter/regulator/lubricator is recommended for use with your pump to remove harmful dirt and moisture from the compressed air supply, and to provide automatic lubrication to the air motor.

⚠ WARNING

This pump can develop 2250 PSI working pressure at 160 PSI maximum incoming air pressure. Be sure that all system equipment and accessories are rated to withstand the maximum working pressure of this pump. DO NOT exceed the maximum working pressure of the lowest rated component in the system.

Flush the supply lines and hoses with mineral spirits or oil based solvent and blow dry with air before connecting them to the system. This is to purge any contaminants such as dirt, moisture, or metal shavings that could damage the pump or system components.

The pump was tested in lightweight oil which was left in it to protect the pump from corrosion. Flushing of the pump before connecting it to the system might be desired to prevent contamination of the fluid you are pumping.

⚠ WARNING

To reduce the risk of injury from splashing or static sparking when flushing the pump with mineral spirits or oil based solvent, always hold a metal part of the dispensing valve firmly to the side of a grounded metal pail and operate pump at lowest possible fluid pressure.

OPERATION

To start the pump, turn on the main air supply, slowly open the air regulator until the pump runs smoothly. Open the dispensing valve to allow air to be purged from the system. Allow pump to cycle until fluid without air pockets flows from dispensing valve, then close dispensing valve.
In a direct supply system, with adequate air pressure supplied to the air motor, the pump starts when the dispensing valve is opened and stalls against pressure when dispensing valve is closed.

Use the air regulator to control pump speed and fluid pressure. Always use the lowest pressure required to achieve the desired results. Higher pressures will cause pump packings to wear prematurely.

⚠ WARNING

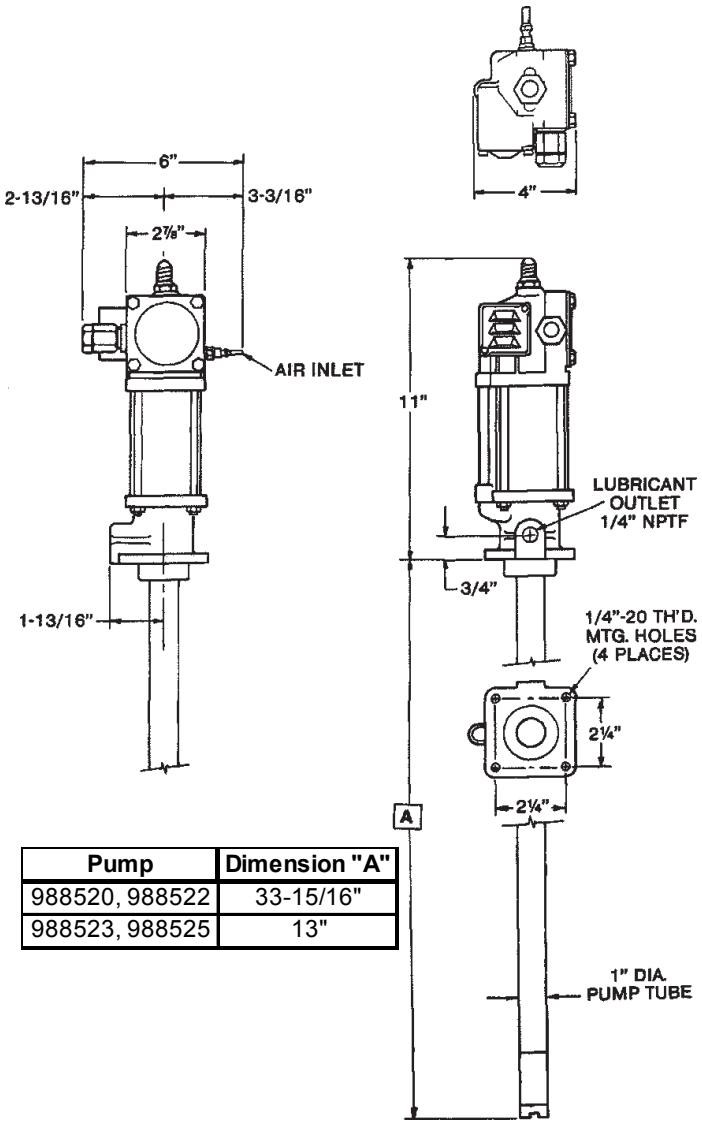
To reduce the risk of serious bodily injury or property damage, NEVER exceed the maximum air or fluid working pressure of the lowest rated system component.

If the pump accelerates rapidly or is running too fast, stop it immediately. Check the fluid supply and refill if necessary. Prime the pump to remove all air from the system or flush the pump and relieve pressure.

MAINTENANCE

⚠ WARNING

To reduce the risk of serious bodily Injury, ALWAYS follow the pressure relief procedure warning whenever you stop the pump and before checking or repairing any part of the system.



Pump	Dimension "A"
988520, 988522	33-15/16"
988523, 988525	13"

14:1 Low Viscosity Fluid Pumps

DISASSEMBLY INSTRUCTIONS

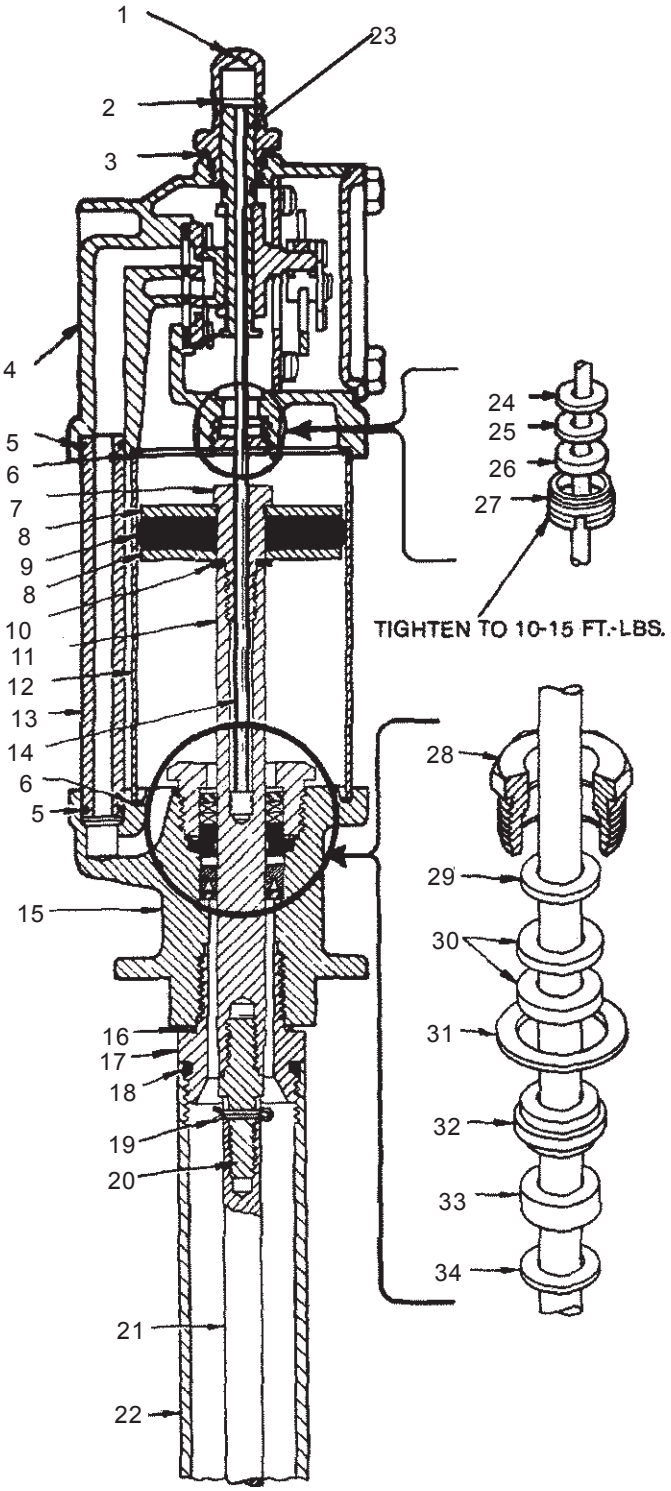
1. Remove Valve Cap (Item #1) and Trip Rod Pin (Item #2).
2. Unscrew Tie Rod Packing Nuts (Item #52) from Tie Rods (Item #51) and lift Air Valve Casting (Item #4) off of Air Cylinder (Item #12).
3. Remove Packing Nut (Item #49) and Packing Cap (Item #46) from Air Valve Casting.
4. Remove four Screws (Item #66) and Cover (Item #65).
5. Remove four Screws (Item #45), Toggle Plate (Item #63) and Trip Shoe (Item #61) and Trip Sleeve (Item #62).
6. Remove four Screws, (Item #60), Springs (Item #59), Valve Guide Plate (Item #58) and Valve Slide, Seat and Gasket (Item #56).
7. Unscrew Trip Rod Packing Nut (Item #27) from Air Valve Casting and remove all packing parts.
8. Unscrew Lower Pump Tube (Item #39) from Pump Tube.
9. Unscrew Pump Tube Adapter (Item #17) and Pump Tube from Outlet Body (Item #15).
10. Place wrenches on Nut (Item #38) and wrench flats of Pump Piston Rod (Item #21) and unscrew Nut. Remove Piston Check (Item #37) and Pump Piston (Item #36).
11. Remove Cotter Pin (Item #19) and unscrew Pump Piston Rod (Item #21) from Adapter Nipple (Item #20).
12. Remove Air Cylinder (Item #12) and Air Passage Tube (Item #13) from Outlet Body (Item #15).
13. Extend Piston Rod (Item #11) out bottom of Outlet Body. Place wrenches on Piston Bolt (Item #7) and on wrench flats of Piston Rod and unscrew Piston Rod (Item #11). Withdraw Piston from Pump Gland.
14. Unscrew Gland Nut (Item #28) from Outlet Body (Item #15) and remove all gland parts.
15. To reassemble, reverse procedure. Tighten fasteners per torque specifications supplied. Important: To prevent damage to Pump Packings and to help increase Packing Life, Lube Air Cylinder and Piston Rod before assembly.

Notes:

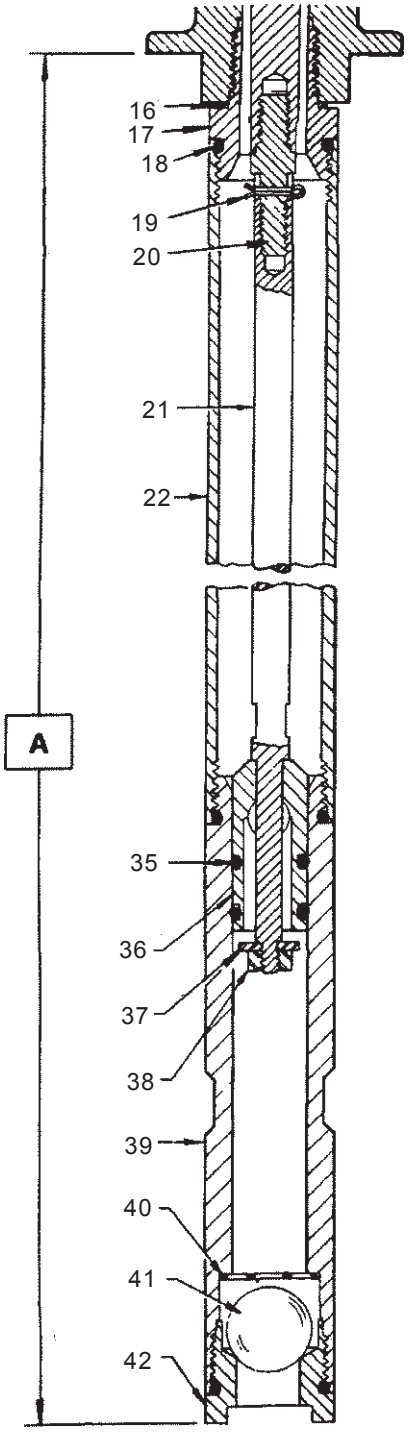
1. If complete disassembly is required, replace all Gaskets, O-rings and Packings.
2. Before tightening four Valve Seat Screws (Item #60), align the Valve Slide, Seat and Gasket (Item #56), Valve Seat Gasket (Item #53) and Air Valve Casting (Item #4) by placing a rod or ink pen through the Center Port Hole.
3. Start all fasteners by hand to avoid stripping threads when reassembling.

⚠ WARNING

DO NOT operate these units with combustible gas.



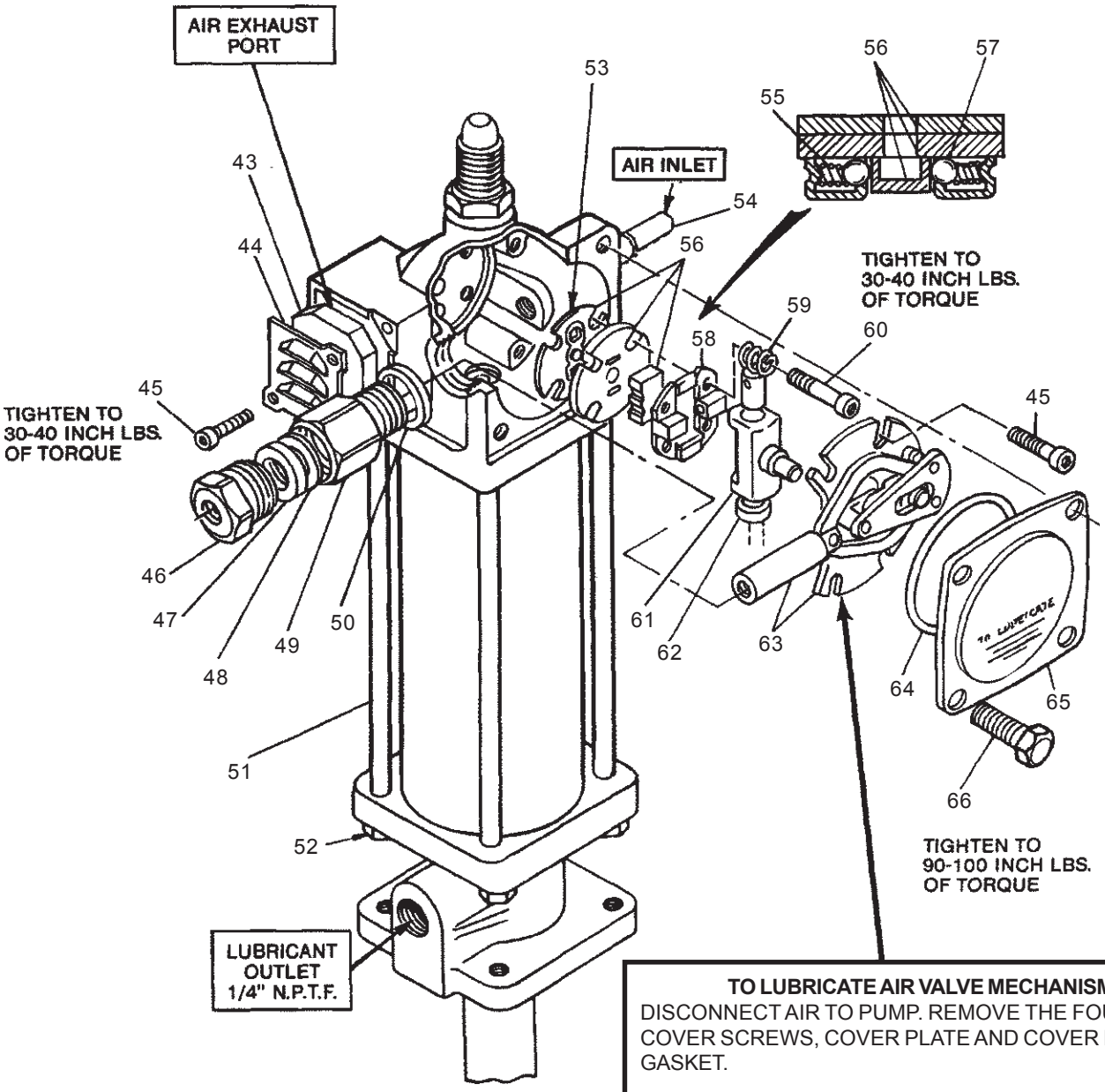
14:1 Low Viscosity Fluid Pumps



TROUBLESHOOTING

1. Pump does not operate.	Check air supply to pump.
	Replace Trip Rod Pin (Item #2), Trip Rod (Item #14) and Toggle Plate (Item #63).
2. Air seepage from air exhaust port while pump is not operating.	Replace Valve Slide, Seat & Gasket (Item #56), Trip Rod Packing (Item #26) and Gasket (Item #24).
3. Loss of pressure, volume or continuous operation of pump when not in normal use.	Clean piston check and ball foot valve. Check Piston (Item #36), Piston Check (Item #37) and 0-rings (Item #33). Replace if worn or damaged.
	Check inside diameter of Lower Pump Tube (Item #39), replace if scored. Inspect lubricant supply line for leaks or breaks.
4. Excessive amount of air entrapped in lubricant or excessive amount of lubricant coming from air exhaust. **Note:** Some lubricant exhausts with air normally.	Replace two Gland Packings (Item #30),
	Gland Gasket (Item #31) and U-cup Packing (Item #33).
5. Pump will not stall against fluid pressure on "Up" stroke.	Replace O-rings(Item #33).
	Clean Piston Check (Item #37) and seating surface of Piston (Item #36).
6. Pump will not stall against fluid pressure on "Down" stroke.	Clean ball foot valve.

14:1 Low Viscosity Fluid Pumps



IMPORTANT: Start fasteners by hand to avoid stripping threads when reassembling.

TO LUBRICATE AIR VALVE MECHANISM

DISCONNECT AIR TO PUMP. REMOVE THE FOUR COVER SCREWS, COVER PLATE AND COVER PLATE GASKET.

REMOVE AND DISASSEMBLE THE AIR VALVE CASTING FROM THE PUMP.

THE AIR VALVE CASTING SHOULD BE CLEANED OR FLUSHED TO REMOVE ANY CHIPS, OR OTHER FOREIGN PARTICLES PRIOR TO RE-ASSEMBLY.

BEFORE REPLACING THE TOGGLE ASSEMBLY, PACK CAVITY WITH GREASE.
USE N.L.G.I. No. 1 (LIGHT GRADE) WATER REPELLENT GREASE. APPROX 1-1/2 OUNCES.

REPLACE COVER GASKET, COVER, AND SCREWS. TIGHTEN TO AVOID AIR LEAKS.
PERIODIC INSPECTION OF PARTS AT LEAST ONCE EACH YEAR IS ADVISABLE.

14:1 Low Viscosity Fluid Pumps

PARTS LIST FOR 14:1 LOW VISCOSITY FLUID PUMPS

Item No.	Description	Qty.	Part No. 988520	Part No. 988522	Part No. 988523	Part No. 988525
1	Valve Cap	1	AA11470	AA11470	AA11470	AA11470
2	Trip Rod Pin	1	AA11472	AA11472	AA11472	AA11472
3	Valve Cap Gasket	1	AA30011	AA30011	AA30011	AA30011
4	Air Valve Casting	1	AA237562	AA237562	AA237562	AA237562
5	O-ring	2	AA34368	AA34368	AA34368	AA34368
6	Air Cylinder Gasket	2	AA33014	AA33014	AA33014	AA33014
7	Piston Bolt	1	AA13300	AA13300	AA13300	AA13300
8	Air Piston Washer	2	AA48212	AA48212	AA48212	AA48212
9	Air Piston Packing	1	AA34090	AA34090	AA34090	AA34090
10	Washer	1	AA48468	AA48468	AA48468	AA48468
11	Piston Rod	1	AA238156	AA238156	AA238156	AA238156
12	Air Cylinder	1	AA61041	AA61041	AA61041	AA61041
13	Air Passage Tube	1	AA61502	AA61502	AA61502	AA61502
14	Trip Rod	1	AA91964	AA91964	AA91964	AA91964
15	Outlet Body	1	AA40579	AA273686	AA40579	AA273686
16	Gasket	1	AA31002	AA273677	AA31002	AA273677
17	Pump Tube Adapter	1	AA14374	AA273673	AA14374	AA273673
18	O-ring	3	*AA273532	**AA273533	*AA273532	**AA273533
19	Cotter Pin	1	AA68900	AA273685	AA68900	AA273685
20	Adapter	1	AA14077	AA273667	AA14077	AA273667
21	Piston Rod	1	AA14482	AA273675	AA14482	AA273675
22	Pump Tube	1	AA61540	AA273683	AA61540	AA273683
23	Trip Collar	1	AA11471	AA11471	AA11471	AA11471
24	Gasket	1	AA33039	AA33039	AA33039	AA33039
25	Trip Rod Packing Gasket	1	AA236616	AA236616	AA236616	AA236616
26	Trip Rod Packing	1	AA236835	AA236835	AA236835	AA236835
27	Trip Rod Packing Nut	1	AA245425	AA245425	AA245425	AA245425
28	Gland Nut	1	AA14090	AA273669	AA14090	AA273669
29	Gland Packing Washer	1	AA48448	AA273679	AA48448	AA273679
30	Gland Packing	2	*AA273536	**AA273537	*AA273536	**AA273537
31	Gland Gasket	1	*AA31050	**AA273678	*AA31050	**AA273678
32	Gland Packing Spacer	1	AA14087	AA273668	AA14087	AA273668
33	U-cup	1	*AA273605	**AA273606	*AA273605	**AA273606
34	Washer	1	AA48474	AA273680	AA48474	AA273680
35	O-ring	2	*AA273534	**AA273535	*AA273534	**AA273535
36	Pump Piston	1	*AA14372	**AA273672	*AA14372	**AA273672
37	Piston Check	1	*AA14375	**AA273674	*AA14375	**AA273674
38	Nut	1	AA51304	AA273681	AA51304	AA273681
39	Lower Pump Tube	1	AA14371	AA273671	AA14371	AA273671
40	Ball Stop	1	AA57120	AA273682	AA57120	AA273682
41	Check Ball	1	AA66203	AA273619	AA-66203	AA-273619
42	Foot Valve Body	1	AA14370	AA273670	AA14370	AA273670
43	Muffler	1	AA236833	AA236833	AA236833	AA236833
44	Muffler Cover	1	AA236615	AA236615	AA236615	AA236615
45	Screw	6	AA236869	AA236869	AA236869	AA236869

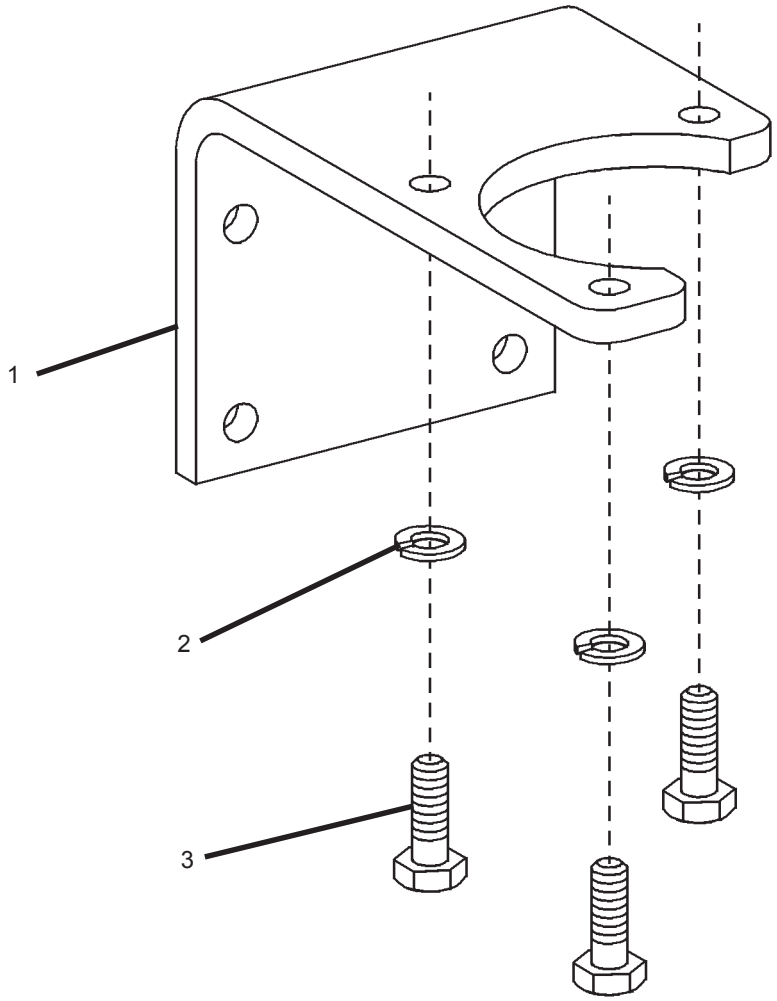
PARTS LIST FOR 14:1 LOW VISCOSITY FLUID PUMPS

Item No.	Description	Qty.	Part No. 988520	Part No. 988522	Part No. 988523	Part No. 988525
46	Packing Cap	1	AA11905	AA11905	AA11905	AA11905
47	Plunger Packing	1	AA34110	AA34110	AA34110	AA34110
48	Packing Washer	1	AA48237	AA48237	AA48237	AA48237
49	Packing Nut	1	AA11904	AA11904	AA11904	AA11904
50	Packing Nut Gasket	1	AA30003	AA30003	AA30003	AA30003
51	Tie Rod	4	AA10294	AA10294	AA10294	AA10294
52	Nut	4	AA51009	AA51009	AA51009	AA51009
53	Valve Gasket	1	AA38162	AA38162	AA38162	AA38162
54	Air Nipple	1	AA238394	AA238394	AA238394	AA238394
55	Spring	2	AA56038	AA56038	AA56038	AA56038
56	Slide and Seat Kit	1	AA83063	AA83063	AA83063	AA83063
57	Steel Ball	2	AA69102	AA69102	AA69102	AA69102
58	Valve Guide Plate	1	AA45605	AA45605	AA45605	AA45605
59	Spring	4	AA55138	AA55138	AA55138	AA55138
60	Valve Seat Screw	4	AA236870	AA236870	AA236870	AA236870
61	Trip Shoe	1	AA11475	AA11475	AA11475	AA11475
62	Trip Sleeve	1	AA11947	AA11947	AA11947	AA11947
63	Toggle Assembly	1	AA91331S	AA91331S	AA91331S	AA91331S
64	O-ring	1	AA34158	AA34158	AA34158	AA34158
65	Cover	1	AA236286	AA236286	AA236286	AA236286
66	Screw	4	AA236868	AA236868	AA236868	AA236868

*Included in Repair Kit No. 988835

**Included in Repair Kit No. 988836

Part No. 988554
Wall Mount Kit



PARTS LIST

Item No.	Description	Qty.	Part No.
1	Bracket	1	AA241401
2	Lockwasher	3	AA66186
3	Hex Head Screw (1/4-20 x 3/4)	3	AA50018

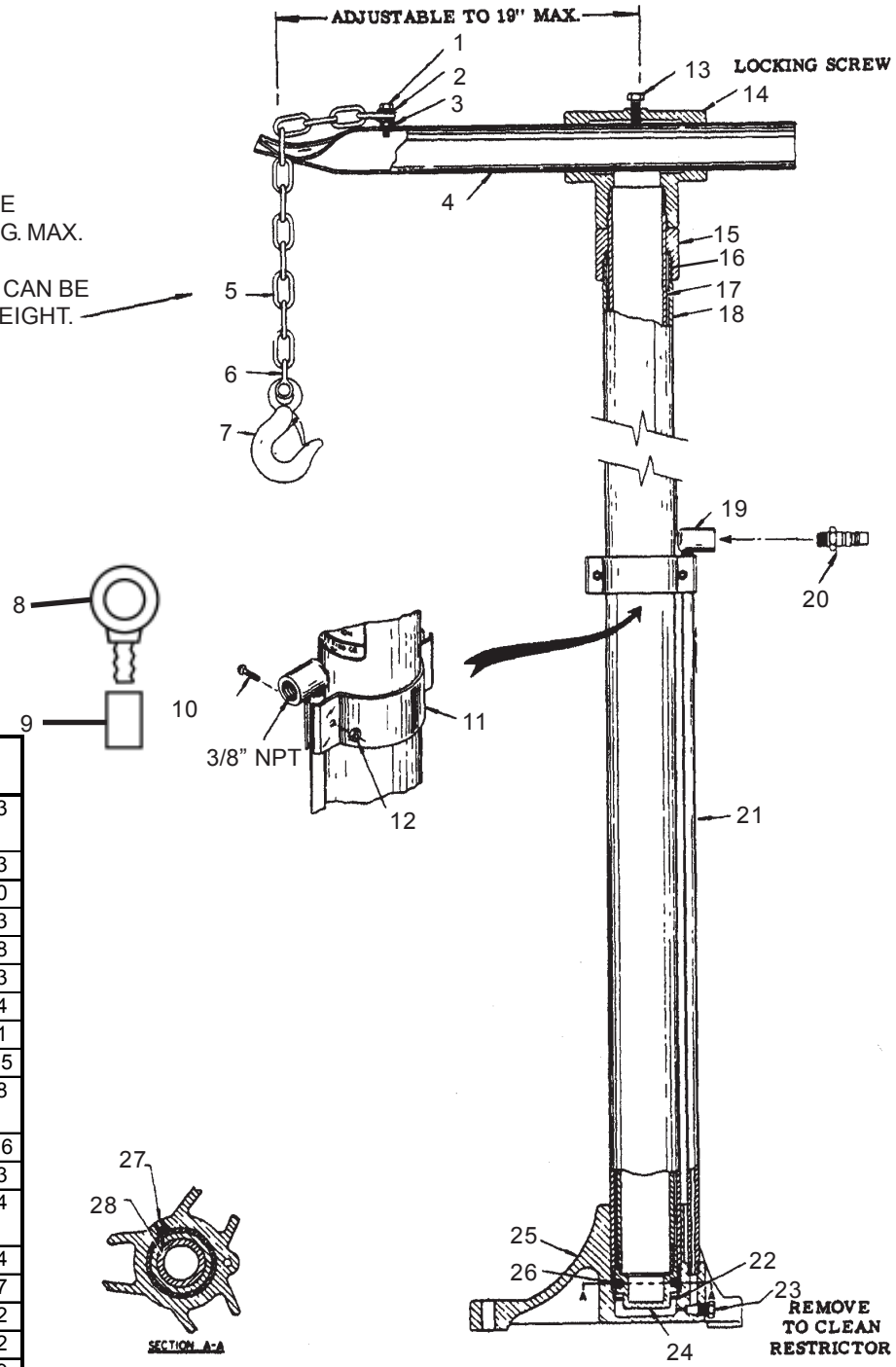
Part No. 988543
Pump Hoist

SPECIFICATIONS

HEIGHT LOWERED - 70-1/2”
HEIGHT RAISED - 108-1/2 lbs.
LIFT CAPACITY - 400 LBS. MAX.
ROTATION - 360°

OPERATING AIR PRESSURE
50 P.S.I.G. MIN. TO 200 P.S.I.G. MAX.

5/0 STRAIGHT LINK CHAIN CAN BE ADJUSTED TO DESIRED HEIGHT.



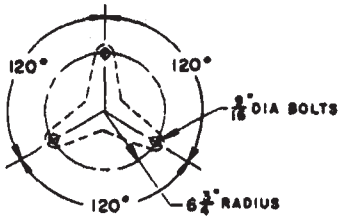
PARTS LIST FOR PUMP HOIST

Item No.	Description	Qty.	Part No.
1	Hex Head Screw (1/4-20 x 1)	1	AA50033
2	Washer	2	AA48083
3	Hex Nut	1	AA51010
4	Support Tube	1	AA61453
5	Chain	1	AA70358
6	Anchor Shackle	1	AA68543
7	Hoist Hook	1	AA68544
8	Eye Bolt	1	AA68531
9	Adapter	1	AA236975
10	Round Head Screw (6-32 x 1-1/8)	2	AA50618
11	Clamp	2	AA360226
12	Hex Nut (6-32)	2	AA51403
13	Hex Head Screw (3/8-16 x 1)	1	AA50044
14	Tee Casting	1	AA40444
15	Tube Cap	1	AA40447
16	Set Screw	1	AA50522
17	Support Tube Assembly	1	AA91632
18	Support Tube	1	AA61439
19	Elbow	1	AA11832
20	Air Nipple	1	AA653106
21	Airline Pipe	1	AA67275
22	Tube Gasket	1	AA33050
23	Plug	1	AA12511
24	Tube Cap	1	AA40446
25	Base Casting	1	AA40445
26	Packing	1	AA34327
27	Set Screw	1	AA50505
28	Packing	1	AA236535

Pump Hoist

INSTALLATION

Base casting can be used as a template for location of anchor bolts. Position of pump hoist in respect to drum location for contractor's rigs. Arm must be adjusted for side opening drums.



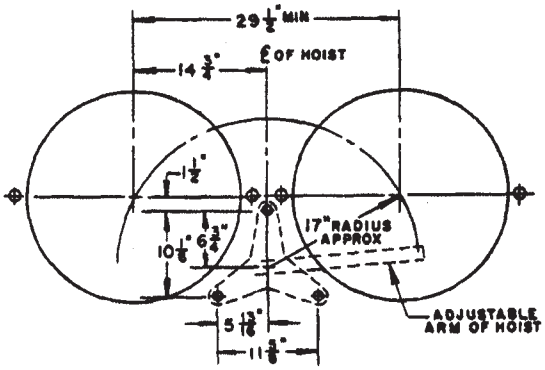


FIG. A
TWO DRUM GROUP

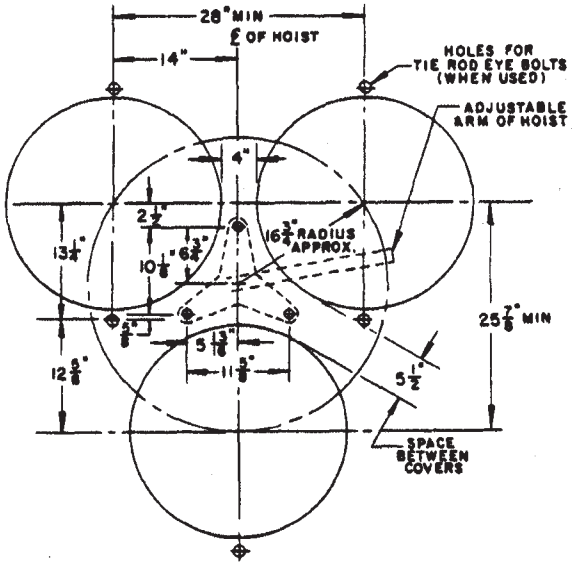


FIG B
THREE DRUM GROUP

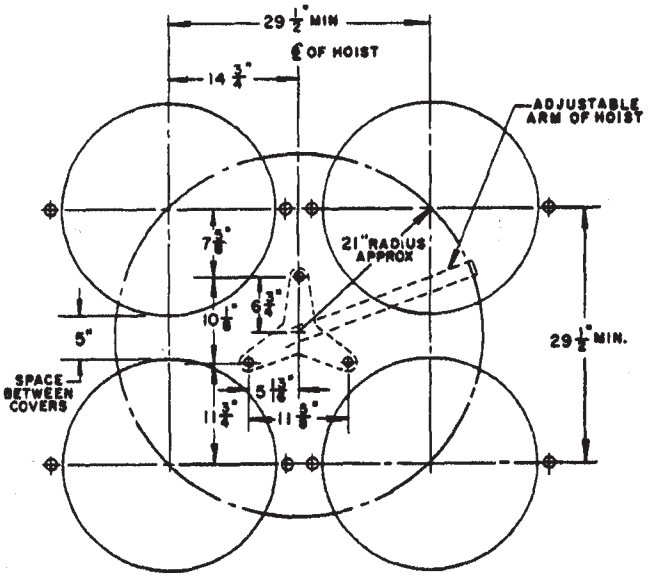


FIG. C
FOUR DRUM GROUP

OPERATION

Fasten Adapter (Item #9) and Eyebolt (Item #8) to top of Ball Pump. Insert Hook (Item #7) through Eyebolt (Item #8), Adjust length of chain (Item #5).

Attach socket of air supply to plug.

(Operating air pressure 50 P.S.I.G. min. to 200 P.S.I.G. Max.) Restrictor in base of air inlet prevents pump hoist from lifting too rapidly.

IMPORTANT: Socket must remain connected to hold hoist in the raised position.
Remove socket to lower hoist. Restrictor in the base of air inlet permits the hoist to lower slowly. The plug located in the base casting can be removed for cleaning the air restrictor.

WARRANTY

Henkel expressly warrants that all products referred to in this Instruction Manual for (Item 988514 (3:1 Pump), 988516 (3:1 Pump), 988517 (3:1 Pump), 988519 (3:1 Pump), 988520 (14:1 Pump), 988522 (14:1 Pump), 988523 (14:1 Pump) 988525 (14:1 Pump), 988543 (Pump Hoist), 988554 (Wall Mount Kit)) (hereafter called “Products”) shall be free from defects in materials and workmanship. Liability for Henkel shall be limited, as its option, to replacing those Products which are shown to be defective in either materials or workmanship or to credit the purchaser the amount of the purchase price thereof (plus freight and insurance charges paid therefor by the user). The purchaser’s sole and exclusive remedy for breach of warranty shall be such replacement or credit.

A claim of defect in materials or workmanship in any Products shall be allowed only when it is submitted in writing within one month after discovery of the defect or after the time the defect should reasonably have been discovered and in any event, within (12) months after the delivery of the Products to the purchaser. This warranty does not apply to perishable items, such as seals, wipers, fuses, filters, etc. No such claim shall be allowed in respect of products which have been neglected or improperly stored, transported, handled, installed, connected, operated, used or maintained. In the event of unauthorized modification of the Products including, where products, parts or attachments for use in connection with the Products are available from Henkel, the use of products, parts or attachments which are not manufactured by Henkel, no claim shall be allowed.

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